

What is claimed is:

1. A home automation system for a home having a plurality of rooms separated by doorways, wherein each room has at least one of the doorways associated therewith, the system comprising:

5 a plurality of controlled objects for placement in rooms;

 a plurality of entry/exit sensors for placement at doorways to detect movement of a person therethrough;

 a plurality of room motion sensors for placement in the rooms to detect occupancy by a person therein; and

10 a controller for controlling the controlled objects in response to both detected movement by the plurality of entry/exit sensors and detected occupancy by the plurality of room motion sensors.

2. The home automation system of claim 1, further comprising:

15 at least one spot sensor for placement in one of the rooms to detect occupancy by a person in a specific location within the one room, wherein the controller further controls at least one of the controlled objects in the one room in response to detected occupancy in the specific location by the spot sensor.

20 3. The home automation system of claim 1, further comprising:

 at least one status sensor for determining a parameter of the home, wherein the controller further controls at least one of the controlled objects in response to the determined parameter of the home.

25 4. The home automation system of claim 1, wherein for each of the rooms:

 the controller assigns the room to a first room state in response to detected movement by one of the entry/exit sensors at the doorway associated with the room and to a second room state in response to detected occupancy by one of the room motion sensors placed in the room; and

30 the control of the controlled objects in the room varies depending upon which of the first and second room states the room is in.

5. The home automation system of claim 4, further comprising:

at least one spot sensor for placement in one of the rooms to detect occupancy by a person in a specific location within the one room, wherein the controller further controls at least one of the controlled objects in the one room in response to detected occupancy in the 5 specific location by the spot sensor.

6. The home automation system of claim 5, wherein the controller assigns the one room to the second room state in response to detected occupancy in the specific location by the spot sensor.

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7. The home automation system of claim 1, wherein:

the controller assigns at least one of the controlled objects to a controlled object state in response to at least one of detected movement by one of the entry/exit sensors and detected occupancy by one of the room motion sensors; and

the controller further controls the at least one controlled object in response to the assigned controlled object state.

8. The home automation system of claim 4, further comprising:

at least one status sensor for determining a parameter of the home, wherein the controller assigns at least one of the controlled objects to a controlled object state in response to at least one of detected movement by one of the entry/exit sensors, detected occupancy by one of the room motion sensors, and the determined home parameter by the status sensor; and wherein the controller further controls the at least one controlled object in response to the assigned controlled object state independent of which of the first and second room states the 25 room is in.

9. The home automation system of claim 1, wherein the plurality of entry/exit sensors includes at least one light beam detector that comprises:

a sending unit that directs a beam of light across one of the doorways, and

30 a receiving unit that receives the light beam, wherein the detector is triggered when the light beam is interrupted by movement of a person through the one doorway.

10. The home automation system of claim 9, further comprising:

a reflective material disposed on a first side of the one doorway, wherein the sending unit and receiving unit are disposed on a second side of the one doorway such that the reflective material reflects the light beam from the sending unit back across the one doorway

5 toward the receiving unit.

11. The home automation system of claim 10, wherein the sending unit is disposed at a height from a bottom of the one doorway which is different from a height from the bottom of the one doorway at which the receiving unit is disposed.

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12. The home automation system of claim 1, wherein the plurality of entry/exit sensors includes at least one narrow range motion sensor for detecting movement of a person only in and adjacent to one of the doorways.

13. The home automation system of claim 1, wherein the plurality of entry/exit sensors includes at least one magnetic contact switch for detecting movement of a door mounted in one of the doorways.

14. The home automation system of claim 1, wherein the plurality of entry/exit sensors includes at least one pressure pad switch for detecting weight of a person walking through one of the doorways.

15. The home automation system of claim 2, wherein the spot sensor includes at least one of a narrow range motion sensor for detecting occupancy in the specific location, a 25 light beam detector having a sending unit to direct a beam of light across the specific location and a receiving unit to receive the light beam, and a pressure pad switch for detecting weight of a person walking through the specific location.

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16. The home automation system of claim 3, wherein the home parameter includes 30 at least one of a time of day, a level of ambient light, and a level of ambient temperature.

17. The home automation system of claim 3, wherein the home parameter includes at least one of a position of a door lock, a fingerprint detected from a person activating a home doorbell, a moisture content outside the home, a level of a pool of the home, a carbon

monoxide level inside the home, a humidity level inside the home, a water level in a basement of the home, and a temperature of water pipes underneath the home.

18. The home automation system of claim 1, further comprising:

5 a communications network connected between the controller, the plurality of entry/exit sensors, the plurality of room motion sensors, and the plurality of controlled objects.

19. The home automation system of claim 18, wherein:

10 the communications network includes wires that extend to each of the rooms in the home, and

each of the plurality of entry/exit sensors, the plurality of room motion sensors, and the plurality of controlled objects has a unique address on the communications network for identification by the controller.

20. The home automation system of claim 18, wherein:

the communications network includes at least one hub,

the controller is connected to the at least one hub, and

each of the plurality of entry/exit sensors, the plurality of room motion sensors, and the plurality of controlled objects are connected to the at least one hub.

21. The home automation system of claim 18, wherein:

the communications network includes a wireless transceiver connected to the controller, and

25 each of the plurality of entry/exit sensors, the plurality of room motion sensors, and the plurality of controlled objects includes a transceiver for communicating with the transceiver connected to the controller.

22. The home automation system of claim 18, wherein the communications

30 network includes:

a power line transceiver connected between the controller and AC powerlines in the home;

a plurality of powerline transceivers each of which connected between the home AC powerlines and one of the plurality of entry/exit sensors, the plurality of room motion

sensors, and the plurality of controlled objects for communicating with the powerline transceiver connected to the controller.

23. The home automation system of claim 1, further comprising:
5 a power outlet for connection to an AC power source, the power outlet includes:
at least one multi-prong receptacle for receiving a power plug from an AC power driven device; and
a communications port for sending and receiving signals over the communications network.

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24. The home automation system of claim 23, further comprising at least one of an IR transmitter jack for connection to an IR transmitter that generates infrared signals in response to the signals received by the communications port, and an IR receiver jack for connection to an IR receiver that generates electrical signals for transmission by the communications port over the communications network in response to infrared signals received by the IR receiver.

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26. The home automation system of claim 23, further comprising:
a power switch for turning AC power on and off to the multi-prong receptacle in response to the signals received by the communications port.

27. The home automation system of claim 23, further comprising:
an electrical current sensor for measuring an electrical current through the multi-prong receptacle, and for generating an output signal based upon the electrical current measurement for transmission by the communications port over the communications network.

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28. A method of automated control of a plurality of controlled objects placed in a plurality of rooms in a home that are separated by doorways, wherein a plurality of entry/exit sensors are placed at the doorways to detect movement of a person therethrough and a plurality of room motion sensors are placed in the rooms to detect occupancy by a person therein, and wherein each room has at least one of the doorways associated therewith, the method comprising the steps of:

controlling the controlled objects in response to detected movement by the plurality of entry/exit sensors; and

controlling the controlled objects in response to detected occupancy by the plurality of room motion sensors.

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28. The method claim 27, further comprising the step of:

controlling at least one of the controlled objects in one of the rooms in response to a spot sensor placed in the one room to detect occupancy by a person in a specific location within the one room.

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29. The method claim 27, further comprising the step of:

controlling at least one of the controlled objects in response to a status sensor that determines a home parameter.

15 30. The method of claim 27, wherein for each of the rooms, further comprising the steps of:

assigning the room to a first room state in response to detected movement by one of the entry/exit sensors at the doorway associated with the room;

assigning the room to a second room state in response to detected occupancy by one of the room motion sensors placed in the room;

wherein the controlling steps vary depending upon which of the first and second room states the room is in.

25 31. The method of claim 30, further comprising the step of:

controlling at least one of the controlled objects in one of the rooms in response to a spot sensor placed in the one room for detecting occupancy by a person in a specific location within the one room.

30 32. The method of claim 30, further comprising the step of:

assigning the room to the second room state in response to detected occupancy in the specific location by the spot sensor.

33. The method of claim 27, further comprising the steps of:
assigning at least one of the controlled objects to a controlled object state in response
to at least one of detected movement by one of the entry/exit sensors and detected occupancy
by one of the room motion sensors; and

5 controlling the at least one controlled object in response to the assigned controlled
object state.

34. The method of claim 30, further comprising the steps of:
assigning at least one of the controlled objects to a controlled object state in response
10 to at least one of detected movement by one of the entry/exit sensors, detected occupancy by
one of the room motion sensors, and the determined home parameter by the status sensor; and
controlling the at least one controlled object in response to the assigned controlled object
state independent of which of the first and second room states the room is in.

15 35. The method of claim 27, wherein the home parameter includes at least one of
a time of day, a level of ambient light, and a level of ambient temperature.

20 36. The method of claim 27, wherein the home parameter includes at least one of
a position of a door lock, a fingerprint detected from a person activating a home doorbell, a
moisture content outside the home, a level of a pool of the home, a carbon monoxide level
inside the home, a humidity level inside the home, a water level in a basement of the home,
and a temperature of water pipes underneath the home.